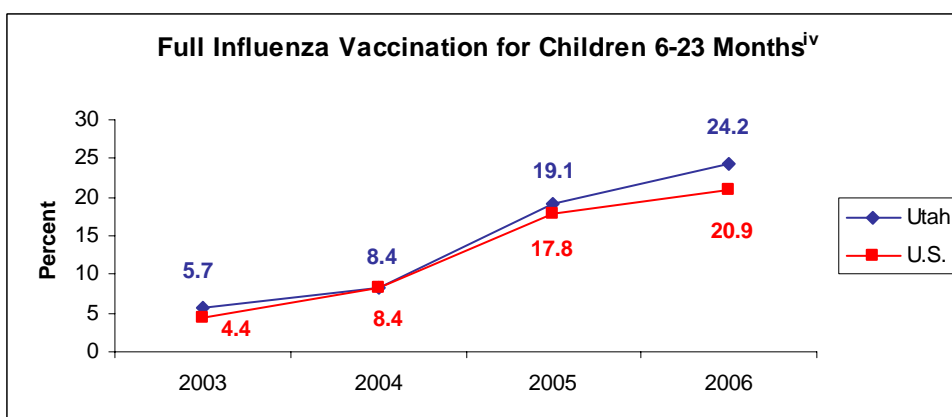
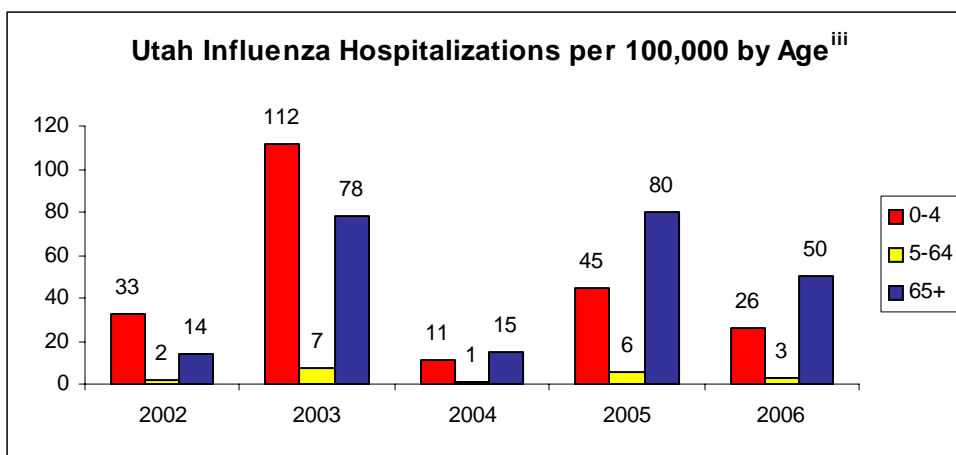


Additional Antigens - Influenza

Influenza (flu) is a very contagious viral infection of the nose, throat, bronchial tubes, and lungs. Flu is a respiratory infection and generally does not involve gastrointestinal symptoms, except in very young children. It is estimated that 30 to 60 million U.S. residents get the flu each year. About 100,000 of them are hospitalized and an estimated 36,000 die each year from complications (primarily pneumonia) associated with the infection. Populations that are particularly susceptible to influenza include adults 65 years or older (more than 90% of all influenza deaths), children less than 24 months, people with cardiovascular disease, chronic respiratory disease, and people with chronic metabolic disease such as diabetes.ⁱ Each year in the U.S. there are between 100 and 500 hospitalizations per 100,000 children 0-4 years.ⁱⁱ Utah data can be seen in the first chart below.

Flu vaccine is up to 90% effective in preventing illness for healthy populations younger than 65ⁱⁱⁱ, but effectiveness is contingent upon the strains used in the vaccine being similar to the strains that circulate during flu season. For populations older than 65 years, the vaccine is 30-40% effective in preventing illness, 50-60% in preventing hospitalization, and 80% effective in preventing death. As indicated below, Utah compares favorably with national flu vaccination rates for children 6-23 months, but there is still much room for improvement. Charts for flu vaccination among adults 18 years and older can be found on the *Child and Adult Immunization* pages in the main body of this report.

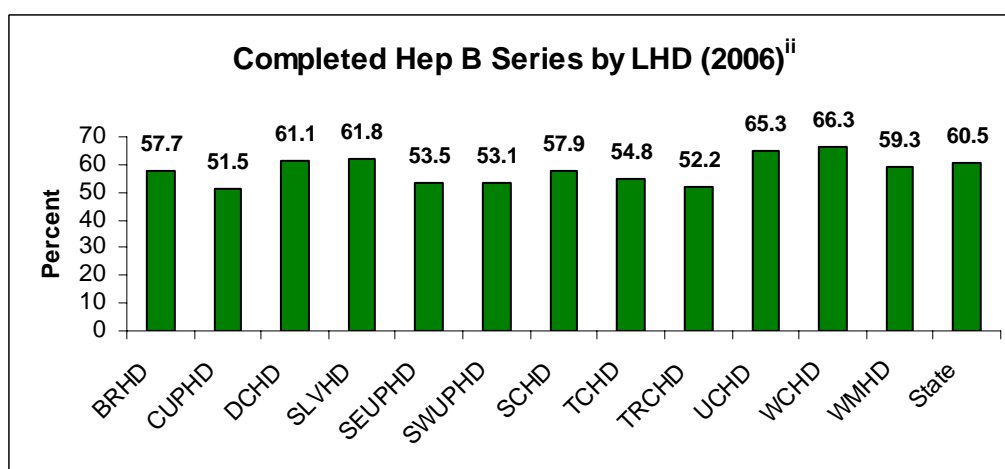
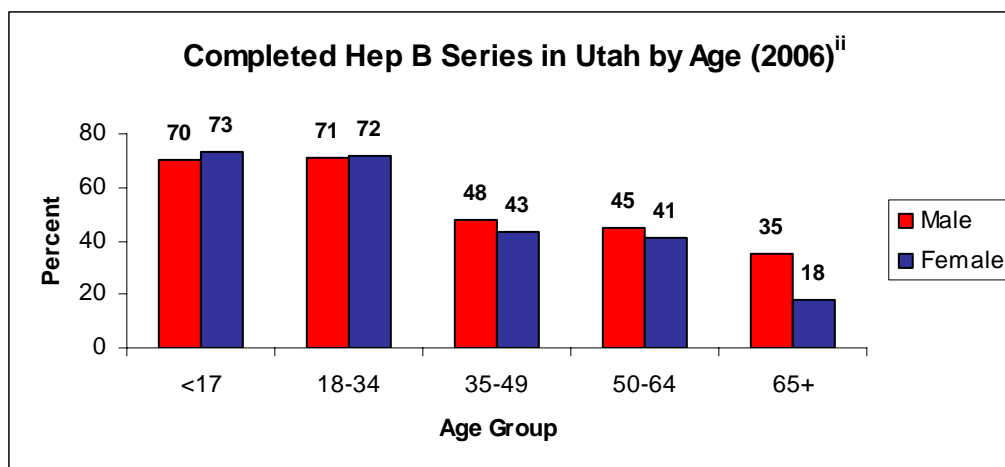
The 2006 National Health Interview Survey (NHIS) collected flu vaccination data among people with asthma during the 2005-2006 flu season. This survey indicated that 36.2% of participants 2 years and older with asthma received a flu vaccine, while 23.9% of participants without asthma were vaccinated. The NHIS found that, among all age groups, persons with asthma were more likely to be vaccinated than persons without asthma. Flu vaccination was higher among persons with health insurance and among persons with increasing numbers of annual healthcare visits.^v



Sources: ⁱ <http://ibis.health.utah.gov/indicator/view/InflCas.Year.html>, ⁱⁱ Epidemiology and Prevention of Vaccine-Preventable Diseases (CDC Pink Book), ⁱⁱⁱ IBIS-PH Hospitalization data, ^{iv} NIS 2003-2006, ^v CDC, Influenza Vaccination Coverage Among Persons with Asthma—United States, 2005-2006 Influenza Season. MMWR 2008;57(No. 224).

Additional Antigens - Hepatitis B

Hepatitis B is second only to tobacco among known human carcinogens and is the cause of up to 80% of liver cancers. In the U.S. there are between 1 and 1.25 million persons infected with chronic Hepatitis B and 5,000 to 8,000 become chronically infected each year. Persons with chronic infections may be asymptomatic, but can still infect others. Transmission occurs by parenteral or mucosal exposure to body fluids from someone with acute or chronic infection. In the U.S., the most common mode of transmission is through sexual contact. Adult candidates for vaccination include men who have sex with men, heterosexuals who have multiple partners, persons diagnosed with a sexually transmitted disease (STD), prostitutes, injection drug users, inmates of long-term correctional institutions, persons receiving hemodialysis, and health care workers. Ninety to 95% of teens and adults and 98%-100% of infants receiving a completed series (3 doses) will develop sufficient antibodies for protection against infection.ⁱ The number of Utah adults who have completed the vaccine series is slightly above 60%. The percentage drops as age increases, which is expected since the vaccine wasn't available until 1981. There is little variation in coverage levels across local health districts.



Sources:

ⁱ Epidemiology and Prevention of Vaccine-Preventable Diseases (CDC Pink Book),

ⁱⁱ 2006 Utah Health Status Survey